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THE FARMER AS A CONSERVATIONIST

By

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FOREWORD

Those of us engaged in broad action programs sometimes tend to lose sight of individual values in conservation. Here, Mr. Leopold reminds us of these and what they mean for the community and for the future of better land use.

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THE FARMER AS A CONSERVATIONIST

Conservation means harmony between men and land.

When land does well for its owner, and the owner does well by his land; when both end up better by reason of their partnership, we have conservation. When one or the other grows poorer, we do not.

Few acres in North America have escaped impoverishment through human use. If someone were to map the continent for gains and losses in soil fertility, waterflow, flora, and fauna, it would be difficult to find spots where less than three of these four basic resources have retrograded; easy to find spots where all four are poorer than when we took them over from the Indians.

As for the owners, it would be a fair assertion to say that land depletion has broken as many as it has enriched.

It is customary to fudge the record by regarding the depletion of flora and fauna as inevitable, and hence lea ving them out of the account. The fertile productive farm is regarded as a success, even though it has lost most of its native plants and animals. Conservation protests such a biased accounting. It was necessary, to be sure, to eliminate a few species, and to change radically the distribution of many. But it remains a fact that the average American township has lost a score of plants and animals through indifference for every one it has lost through necessity.

What is the nature of the process by which men destroy land? What kind of events made it possible for that much-quoted old-timer

to say: "You can't tell me about farming; I've worn out three farms already and this is my fourth"?

Most thinkers have pictured a process of gradual exhaustion. Land, they say, is like a bank account: if you draw more than the interest, the principal dwindles. When Van Hise said "Conservation is wise use," he meant, I think, restrained use.

Certainly conservation means restraint, but there is something else that needs to be said. It seems to me that many land resources, when they are used, get out of order and disappear or deteriorate before anyone has a chance to exhaust them.

Look, for example, at the eroding farms of the cornbelt. When our grandfathers first broke this land, did it melt away with every rain that happened to fall on a thawed frost-pan? Or in a furrow not exactly on contour? It did not; the newly broken soil was tough, resistant, elastic to strain. Soil treatments which were safe in 1840 would be suicidal in 1940. Fertility in 1840 did not go down river faster than up into crops. Something has got out of order. We might almost say that the soil bank is tottering, and this is more important than whether we have overdrawn or underdrawn our interest.

Look at the northern forests: did we build barns out of all the pineries which once covered the lake states? No. As soon as we had opened some big slashings we made a path for fires to invade the woods. Fires cut off growth and reproduction. They outran the lumberman and they mopped up behind him, destroying not only the timber but also the soil and the seed. If we could have

kept the soil and the seed, we should be harvesting a new crop of pines now, regardless of whether the virgin crop was cut too fast or too slow. The real damage was not so much the overcutting, it was the run on the soil-timber bank.

A still clearer example is found in farm woodlots. By pasturing their woodlots, and thus preventing all new growth, cornbelt farmers are gradually eliminating woods from the farm landscape. The wildflowers and wildlife are of course lost long before the woodlot itself disappears. Overdrawing the interest from the woodlot bank is perhaps serious, but it is a bagatelle compared with destroying the capacity of the woodlot to yield interest. Here again we see awkward use, rather than over-use, disordering the resource.

In wild-life the losses from the disordering of natural mechanisms have, I suspect, far exceeded the losses from exhaustion. Consider the thing we call "the cycle," which deprives the northern states of all kinds of grouse and rabbits about seven years out of every ten. Were grouse and rabbits always and everywhere cyclic? I used to think so, but I now doubt it. I suspect that cycles are a disorder of animal populations, in some way spread by awkward land-use. We don't know how, because we do not yet know what a cycle is. In the far north cycles are probably natural and inherent, for we find them in the untouched wilderness, but down here I suspect they are not inherent. I suspect they are spreading, both in geographic sweep and in number of species affected.

Consider the growing dependence of fishing waters on artificial restocking. A big part of this loss of toughness inheres in

the disordering of waters by erosion and pollution. Hundreds of southerly trout streams which once produced natural brook trout are stepping down the ladder of productivity to artificial brown trout, and finally to carp. As the fish resource dwindles, the flood and erosion losses grow. Both are expressions of a single deterioration. Both are not so much the exhaustion of a resource as the sickening of a resource.

Consider deer. Here we have no exhaustion; perhaps there are too many deer. But every woodsman knows that deer in many places are exterminating the plants on which they depend for winter food. Some of these, such as white cedar, are important forest trees. Deer did not always destroy their range. Something is out of kilter. Perhaps it was a mistake to clean out the wolves; perhaps natural enemies acted as a kind of thermostat to close the "draft" on the deer supply. I know of deer herds in Mexico which never get out of kilter with their range; there are wolves and cougars there, and always plenty of deer but never too many. There is substantial balance between those deer and their range, just as there was substantial balance between the buffalo and the prairie.

Conservation, then, is keeping the resource in working order, as well as preventing over-use. Resources may get out of order before they are exhausted, sometimes while they are still abundant. Conservation, therefore, is a positive exercise of skill and insight, not merely a negative exercise of abstinence or caution.

What is meant by skill and insight?

This is the age of engineers. For proof of this I look not

so much to Boulder Dams or China Clippers as to the farmer boy tending his tractor or building his own radio. In a surprising number of men there burns a curiosity about machines and a loving care in their construction, maintenance, and use. This bent for mechanisms, even though clothed in greasy overalls, is often the pure fire of intellect. It is the earmark of our times.

Everyone knows this, but what few realize is that an equal bent for the mechanisms of nature is a possible earmark of some future generation.

No one dreamed, a hundred years ago, that metal, air, petroleum, and electricity could coordinate as an engine. Few realize today that soil, water, plants, and animals are an engine, subject, like any other, to derangement. Our present skill in the care of mechanical engines did not arise from fear lest they fail to do their work. Rather was it born of curiosity and pride of understanding. Prudence never kindled a fire in the human mind; I have no hope for conservation born of fear. The 4-H boy who becomes curious about why red pines need more acid than white is closer to conservation than he who writes a prize essay on the dangers of timber famine.

This necessity for skill, for a lively and vital curiosity about the workings of the biological engine, can teach us something about the probably success of farm conservation policies. We seem to be trying two policies, education and subsidy. The compulsory teaching of conservation in schools, the 4-H conservation projects, and school forests are examples of education. The woodlot tax law, state game and tree nurseries, the crop control program, and the

soil conservation program are examples of subsidy.

I offer this opinion: these public aids to better private land use will accomplish their purpose only as the farmer matches them with this thing which I have called skill. Only he who has planted a pine grove with his own hands, or built a terrace, or tried to raise a better crop of birds can appreciate how easy it is to fail; how futile it is passively to follow a recipe without understanding the mechanisms behind it. Subsidies and propaganda may evoke the farmer's acquiescence, but only enthusiasm and affection will evoke his skill. It takes something more than a little "bait" to succeed in conservation. Can our schools, by teaching, create this something? I hope so, but I doubt it, unless the child brings also something he gets at home. That is to say, the vicarious teaching of conservation is just one more kind of intellectual orphanage; a stop-gap at best.

Thus we have traversed a circle. We want this new thing, we have asked the schools and the government to help us catch it, but we have tracked it back to its den under the farmer's doorstep.

I feel sure that there is truth in these conclusions about the human qualities requisite to better land use. I am less sure about many puzzling questions of conservation economics.

Can a farmer afford to devote land to woods, marsh, pond, windbreaks? These are semi-economic land uses, - that is, they have utility but they also yield non-economic benefits.

Can a farmer afford to devote land to fencerows for the birds, to snag-trees for the coons and flying squirrels? Here the utility

shrinks to what the chemist calls "a trace."

Can a farmer afford to devote land to fencerows for a patch of ladyslippers, a remnant of prairie, or just scenery? Here the utility shrinks to zero.

Yet conservation is any or all of these things.

Many labored arguments are in print proving that conservation pays economic dividends. I can add nothing to these arguments. It seems to me, though, that something has gone unsaid. It seems to me that the pattern of the rural landscape, like the configuration of our own bodies, has in it (or should have in it) a certain wholeness. No one censures a man who loses his leg in an accident, or who was born with only four fingers, but we should look askance at a man who amputated a natural part on the grounds that some other is more profitable. The comparison is exaggerated; we had to amputate many marshes, ponds and woods to make the land habitable, but to remove any natural feature from representation in the rural landscape seems to me a defacement which the calm verdict of history will not approve, either as good conservation, good taste, or good farming.

Consider a single natural feature: the farm pond. Our godfather the Ice-king, who was in on the christening of Wisconsin, dug hundreds of them for us. We have drained ninety and nine. If you don't believe it, look on the original surveyor's plot of your township; in 1840 he probably mapped water in dozens of spots where in 1940 you may be praying for rain. I have an undrained pond on my farm. You should see the farm families flock to it of a Sunday,

everybody from old grandfather to the new pup, each bent on the particular aquatic sport, from water lilies to bluegills, suited to his (or her) age and waistline. Many of these farm families once had ponds of their own. If some drainage promoter had not sold them tiles, or a share in a steam shovel, or some other dream of sudden affluence, many of them would still have their own water lilies, their own bluegills, their own swimming hole, their own redwings to hover over a buttonbush and proclaim the spring.

If this were Germany, or Denmark, with many people and little land, it might be idle to dream about land-use luxuries for every farm family that needs them. But we have excess plowland; our conviction of this is so unanimous that we spend a billion out of the public chest to retire the surplus from cultivation. In the face of such an excess, can any reasonable man claim that economics prevents us from getting a life, as well as a livelihood, from our acres?

Sometimes I think that ideas, like men, can become dictators. We Americans have so far escaped regimentation by our rulers, but have we escaped regimentation by our own ideas? I doubt if there exists today a more complete regimentation of the human mind than that accomplished by our self-imposed doctrine of ruthless utilitarianism. The saving grace of democracy is that we fastened this yoke on our own necks, and we can cast it off when we want to, without severing the neck. Conservation is perhaps one of the many squirmings which foreshadow this act of self-liberation.

The principle of wholeness in the farm landscape involves, I think, something more than indulgence in land-use luxuries. Try to send your mind up in an airplane; try to see the trend of our tinkerings with fields and forests, waters and soils. We have gone in for governmental conservation on a huge scale. Government is slowly but surely pushing the cutovers back into forest; the peat and sand districts back into marsh and scrub. This, I think, is as it should be. But the cow in the woodlot, ably assisted by the ax, the depression, the June beetle, and the drouth, is just as surely making southern Wisconsin a treeless agricultural steppe. There was a time when the cessation of prairie fires added trees to southern Wisconsin faster than the settlers subtracted them. That time is now past. In another generation many southern counties will look, as far as trees are concerned, like the Ukraine, or the Canadian wheatlands. A similar tendency to create monotypes, to block up huge regions to a single land-use, is visible in many other states. It is the result of delegating conservation to government. Government cannot own and operate small parcels of land, and it cannot own and operate good land at all.

Stated in acres or in board feet, the crowding of all the timber into one place may be a forestry program, but is it conservation? How shall we use forests to protect vulnerable hillsides and riverbanks from erosion when the bulk of the timber is up north on the sands where there is no erosion? To shelter wildlife when all the food is in one county and all the cover in another? To break the wind when the forest country has no wind, the farm country

nothing but wind? For recreation when it takes a week, rather than an hour, to get under a pine tree? Doesn't conservation imply a certain pepper-and-salt pattern in the warp and woof of the land-use fabric? If so, can government alone do the weaving? I think not.

It is the individual farmer who must weave the greater part of the rug on which America stands. Shall he weave into it only the sober yarns which warm the feet, or also some of the colors which warm the eye and the heart? Granted that there may be a question which returns him the most profit as an individual, can there be any question which is best for his community? This raises the question: is the individual farmer capable of dedicating private land to uses which profit the community, even though they may not so clearly profit him? We may be over-hasty in assuming that he is not.

I am thinking, for example, of the windbreaks, the evergreen snow-fences, hundreds of which are peeping up this winter out of the drifted snows of the sandy counties. Part of these plantings are subsidized by highway funds, but in many others the only subsidy is the nursery stock. Here then is a dedication of private land to a community purpose, a private labor for a public gain. These windbreaks do little good until many land-owners install them; much good after they dot the whole countryside. But this "much good" is an undivided surplus, payable not in dollars, but rather in fertility, peace, comfort, in the sense of something alive and growing. It pleases me that farmers should do this new thing. It foreshadows conservation. It may be remarked, in passing, that this planting of

windbreaks is a direct reversal of the attitude which uprooted the hedges, and thus the wildlife, from the entire cornbelt. Both moves were fathered by the agricultural colleges. Have the colleges changed their mind? Or is an osage windbreak governed by a different kind of economics than a red pine windbreak?

There is still another kind of community planting where the thing to be planted is not trees but thoughts. To describe it, I want to plant some thoughts about a bush. It is called bog-birch.

I select it because it is such a mousy, unobtrusive, inconspicuous, uninteresting little bush. You may have it in your marsh but have never noticed it. It bears no flower that you would recognize as such, no fruit which bird or beast could eat. It doesn't grow into a tree which you could use. It does no harm, no good, it doesn't even turn color in fall. Altogether it is the perfect nonentity in bushes; the complete biological bore.

But is it? Once I was following the tracks of some starving deer. The tracks led from one bog-birch to another; the browsed tips showed that the deer were living on it, to the exclusion of scores of other kinds of bushes. Once in a blizzard I saw a flock of sharp-tail grouse, unable to find their usual grain or weed seeds, eating bog-birch buds. They were fat.

Last summer the botanists of the University Arboretum came to me in alarm. The brush, they said, was shading out the white lady-slippers in the Arboretum marsh. Would I ask the CCC crews to clear it? When I examined the ground, I found the offending brush was bog-birch. I cut the sample shown on the left of the drawing. Notice

that up to two years ago rabbits had mowed it down each year. In 1936 and 1937 the rabbits had spared it, hence it grew up and shaded the ladyslippers. Why? Because of the cycle; there were no rabbits in 1936 and 1937. This past winter of 1938 the rabbits mowed off the bog-birch, as shown on the right of the drawing.

It appears, then, that our little nonentity, the bog-birch, is important after all. It spells life or death to deer, grouse, rabbits, ladyslippers. If, as some think, cycles are caused by sun-spots, the bog-birch might even be regarded a sort of envoy for the solar system, dealing out appeasement to the rabbit, in the course of which a suppressed orchid finds its place in the sun.

The bog-birch is one of hundreds of creatures which the farmer looks at, or steps on, every day. There are 350 birds, ninety mammals, 150 fishes, seventy reptiles and amphibians, and a vastly greater number of plants and insects native to Wisconsin. Each state has a similar diversity of wild things.

Disregarding all those species too small or too obscure to be visible to the layman, there are still perhaps 500 whose lives we might know, but don't. I have translated one little scene out of the life-drama of one species. Each of the 500 has its own drama. The stage is the farm. The farmer walks among the players in all his daily tasks, but he seldom sees any drama, because he does not understand their language. Neither do I, save for a few lines here and there. Would it add anything to farm life if the farmer learned more of that language?

One of the self-imposed yokes we are casting off is the false

idea that farm life is dull. What is the meaning of John Steuart Curry, Grant Wood, Thomas Benton? They are showing us drama in the red barn, the stark silo, the team heaving over the hill, the country store, black against the sunset. All I am saying is that there is also drama in every bush, if you can see it. When enough men know this, we need fear no indifference to the welfare of bushes, or birds, or soil, or trees. We shall then have no need of the word conservation, for we shall have the thing itself.

The landscape of any farm is the owner's portrait of himself.

Conservation implies self-expression in that landscape, rather than blind compliance with economic dogma. What kinds of self-expression will one day be possible in the landscape of a corn-belt farm? What will conservation look like when transplanted from the convention hall to the fields and woods?

Begin with the creek: it will be unstraightened. The future farmer would no more mutilate his creek than his own face. If he has inherited a straightened creek, it will be "explained" to visitors, like a pock-mark or a wooden leg.

The creek banks are wooded and ungrazed. In the woods, young straight timber-bearing trees predominate, but there is also a sprinkling of hollow-limbed veterans left for the owls and squirrels, and of down logs left for the coons and fur-bearers. On the edge of the woods are a few wide-spreading hickories and walnuts for nutting. Many things are expected of this creek and its woods: cordwood, posts, and sawlogs; flood-control, fishing and swimming; nuts and wildflowers; fur and feather. Should it fail to

yield an owl-hoot or a mess of quail on demand, or a bunch of sweet william or a coon-hunt in season, the matter will be cause for injured pride and family scrutiny, like a check marked "no funds."

Visitors when taken to the woods often ask, "Don't the owls eat your chickens?" Our farmer knows this is coming. For answer, he walks over to a leafy white oak and picks up one of the pellets dropped by the roosting owls. He shows the visitor how to tear apart the matted felt of mouse and rabbit fur, how to find inside the whitened skulls and teeth of the bird's prey. "See any chickens?" he asks. Then he explains that his owls are valuable to him, not only for killing mice, but for excluding other owls which might eat chickens. His owls get a few quail and many rabbits, but these, he thinks, can be spared.

The fields and pastures of this farm, like its sons and daughters, are a mixture of wild and tame attributes, all built on a foundation of good health. The health of the fields is their fertility. On the parlor wall, where the embroidered "God Bless Our Home" used to hang in exploitation days, hangs a chart of the farm's soil analyses. The farmer is proud that all his soil graphs point upward, that he has no check dams or terraces, and needs none. He speaks sympathetically of his neighbor who has the misfortune of harboring a gully, and who was forced to call in the CCC. The neighbor's check dams are a regrettable badge of awkward conduct, like a crutch.

Separating the fields are fencerows which represent a happy balance between gain in wildlife and loss in plowland. The fence-

rows are not cleaned yearly, neither are they allowed to grow indefinitely. In addition to bird song and scenery, quail and pheasants, they yield prairie flowers, wild grapes, raspberries, plums, hazelnuts, and here and there a hickory beyond the reach of the woodlot squirrels. It is a point of pride to use electric fences only for temporary enclosures.

Around the farmstead are historic oaks which are cherished with both pride and skill. That the June beetles once got one is remembered as a slip in pasture management, not to be repeated. The farmer has opinions about the age of his oaks, and their relation to local history. It is a matter of neighborhood debate whose oaks are most clearly relics of oak-opening days, whether the healed scar on the base of one tree is the result of a prairie fire or a pioneer's trash pile.

Martin house and feeding station, wildflower bed and old orchard go with the farmstead as a matter of course. The old orchard yields some apples but mostly birds. The bird list for the farm is 161 species. One neighbor claims 165, but there is reason to suspect he is fudging. He drained his pond; how could he possibly have 165?

His pond is our farmer's special badge of distinction. Stock is allowed to water at one end only; the rest of the shore is fenced off for the ducks, rails, redwings, gallinules, and muskrats. Last spring, by judicious baiting and decoys, two hundred ducks were induced to rest there a full month. In August, yellow-legs use the bare mud of the water-gap. In September the pond yields an armful

of waterlilies. In the winter there is skating for the youngsters, and a neat dozen of rat-pelts for the boys' pin-money. The farmer remembers a contractor who once tried to talk drainage. Pondless farms, he says, were the fashion in those days; even the Agricultural College fell for the idea of making land by wasting water. But in the drouths of the thirties, when the wells went dry, everybody learned that water, like roads and schools, is community property. You can't hurry water down the creek without hurting the creek, the neighbors, and yourself.

The roadside fronting the farm is regarded as a refuge for the prairie flora; the educational museum where the soils and plants of pre-settlement days are preserved. When the professors from the college want a sample of virgin prairie soil, they know they can get it here. To keep this roadside in prairie, it is cleaned annually, always by burning, never by mowing or cutting. The farmer tells a funny story of a highway engineer who once started to grade the cutbanks all the way back to the fence. It developed that the poor engineer, despite his college education, had never learned the difference between a silphium and a sunflower. He knew his sines an cosines, but he had never heard of the plant succession. He couldn't understand that to tear out all of the prairie sod would convert the whole roadside into an eyesore of quack and thistle.

In the clover field fronting the road is a huge glacial erratic of pink granite. Every year, when the geology teacher brings her class out to look at it, our farmer tells how once, on

a vacation trip, he matched a chip of the boulder to its parent ledge, two hundred miles to the north. This starts him on a little oration on glaciers; how the ice gave him not only the rock, but also the pond, and the gravel pit where the kingfisher and the bank swallows nest. He tells how a powder salesman once asked for permission to blow up the old rock "as a demonstration in modern methods." He does not have to explain his little joke to the children.

He is a reminiscent fellow, this farmer. Get him wound up and you will hear many a curious tidbit of rural history. He will tell you of the mad decade when they taught economics in the local kindergarten, but the college president couldn't tell a blue-bird from a blue cohosh. Everybody worried about getting his share; nobody worried about doing his bit. One farm washed down the river, to be dredged out of the Mississippi at another farmer's expense. Tame crops were over-produced, but nobody had room for wild crops. "It's a wonder this farm came out of it without a concrete creek and a Chinese elm on the lawn." This is his whim-sical way of describing the early fumblings for "conservation."

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